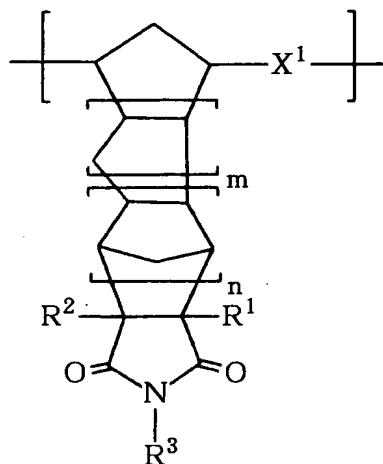


## CLAIMS

1. A ring-opened polynorbornene comprising a structural unit (I) represented by the following general formula (I):

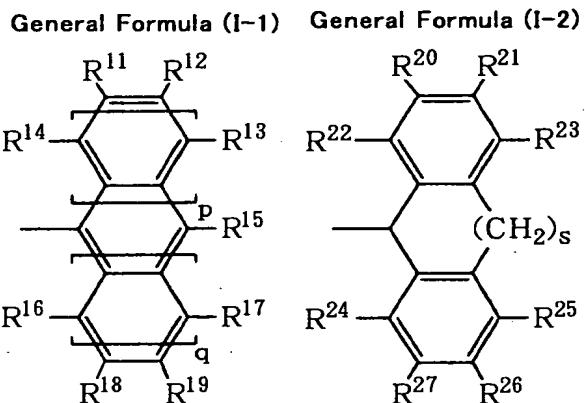
[Chemical formula 1]

General formula (I)



10 wherein in the general formula (I), m and n are, independently of each other, an integer of 0 to 2, X¹ means an ethylene or vinylene group, R¹ and R² denote, independently of each other, a hydrogen atom or a substituted or unsubstituted hydrocarbon group having 1 to 15 carbon atoms, and R³ represents a group represented by the following general formula (I-1) or a group represented by the following general formula (I-2):

[Chemical formula 2]

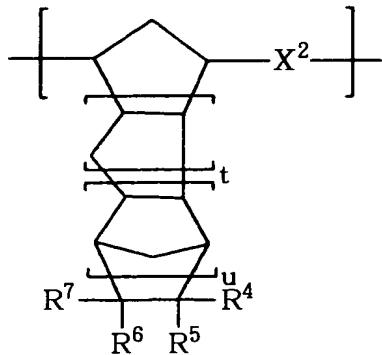


wherein in the general formulae (I-1) and (I-2), R<sup>11</sup> to R<sup>27</sup>  
 5 denote, independently of one another, a hydrogen atom; a halogen atom; a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, which may have a linkage containing or not containing oxygen, sulfur, nitrogen and/or silicon atom(s); or a polar group, p and q in the  
 10 general formula (I-1) are individually 0 or a positive integer, with the proviso that when both p and q are 0, R<sup>12</sup> and R<sup>15</sup>, or R<sup>19</sup> and R<sup>15</sup> may be bonded to each other to form a carbon ring or heterocyclic ring, and the carbon ring or heterocyclic ring may be either a monocyclic structure or a  
 15 polycyclic structure, and s in the general formula (I-2) is 0 or an integer of 1 or greater.

2. The ring-opened polynorbornene according to claim 1, which comprises a structural unit (II) represented by the following general formula (II).

[Chemical formula 3]

**General Formula (II)**



wherein in the general formula (II), t and u are, independently of each other, 0 or a positive integer,  $X^2$  means an ethylene or vinylene group,  $R^4$  to  $R^7$  denote, independently of one another, a hydrogen atom; a halogen atom; a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, which may have a linkage containing or not containing oxygen, sulfur, nitrogen and/or silicon atom(s); or a polar group, with the proviso that  $R^4$  and  $R^5$ , or  $R^6$  and  $R^7$  may be united with each other to form a divalent hydrocarbon group,  $R^4$  or  $R^5$ , and  $R^6$  or  $R^7$  may be bonded to each other to form a carbon ring or heterocyclic ring, and the carbon ring or heterocyclic ring may be either a monocyclic structure or a polycyclic structure.

3. The ring-opened polynorbornene according to claim 2, wherein the proportion of the structural unit (II) is at most 98 mol% based on the whole structural unit.

20 4. The ring-opened polynorbornene according to any one of claims 1 to 3, wherein at least 90 mol% of  $X^1$  in the

general formula (I) and X<sup>2</sup> in the general formula (II) are ethylene groups.

5. The ring-opened polynorbornene according to any one of claims 1 to 4, which has the structural unit (I), in 5 which in the general formula (I), m is 0, and n is 1.

6. The ring-opened polynorbornene according to any one of claims 1 to 5, which has the structural unit (I), in which in the general formula (I-1), p is 0, q is 0, and at least one of R<sup>11</sup> and R<sup>18</sup> is another substituent group than 10 hydrogen.

7. The ring-opened polynorbornene according to any one of claims 1 to 5, which has the structural unit (I), in which in the general formula (I-1), p is 0, q is 0, at least one of R<sup>11</sup> and R<sup>18</sup> has another substituent group than 15 hydrogen, and at least one of R<sup>12</sup>, R<sup>15</sup> and R<sup>19</sup> is another substituent group than hydrogen.

8. The ring-opened polynorbornene according to any one of claims 1 to 5, which has the structural unit (I), in which in the general formula (I-1), p is 0, q is 0, and 20 both R<sup>11</sup> and R<sup>18</sup> are other substituent groups than hydrogen.